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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,620	07/17/2003	Hyeong Seog Kim	HI-0157	9656
34610	7590	02/27/2006	EXAMINER	
FLESHNER & KIM, LLP P.O. BOX 221200 CHANTILLY, VA 20153			NGUYEN, TU X	
			ART UNIT	PAPER NUMBER
			2684	

DATE MAILED: 02/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/620,620

Applicant(s)

KIM, HYEONG SEOG

Examiner

Tu X. Nguyen

Art Unit

2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19 and 20 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 5 and 7-18 is/are rejected.
- 7) ☒ Claim(s) 3 and 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2, 4-5 and 7-9, are rejected under 35 U.S.C. 102(e) as being anticipated by Arrigo et al. (US Patent 6,781,570).

Regarding claim 1, Arrigo et al. disclose a wireless communications device, comprising:

a communication sensitivity checking portion configured to check a sensitivity of at least one communications channel used to communicate with an external access point and to output a sensitivity signal (see col.5 lines 6-26, col.11 line 56 through col.12 line 12, "cell phone" is inherent includes "communications channel"); and

a power mode changing portion configured to change a power mode of the wireless communications device between a working mode and at least one sleep mode based on the sensitivity signal (see col.11 line 25-37).

Regarding claim 2, Arrigo et al. disclose the power mode changing portion is configured to change a power mode of the wireless communications device into a working mode if the sensitivity signal indicates that the communications sensitivity is

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greater than a predefined reference value, and wherein the power mode changing portion is configured to change a power mode of the wireless communications device into a sleep mode if the sensitivity signal indicates that the communications sensitivity is less than a predefined sensitivity value (see col.11 line 56 through col.12 line 3, "algorithm" corresponds to "greater than" and "less than" and "quantitative" corresponds to "sensitivity value").

Regarding claim 4, Arrigo et al. disclose the wireless communications device is in the sleep mode, both a transmission portion and a receive portion of the wireless device are put in a power down mode (see 105a, 105b, fig.1a).

Regarding claim 5, Arrigo et al. disclose the power mode changing portion is configured to switch the power mode into a working mode once a predetermined time period elapses after the power mode has been switched to a sleep mode (col.15 lines 40-54).

Regarding claim 7, Arrigo et al. disclose a data checking portion configured to determine whether data needs to be transmitted to an external access point and configured to output a data check signal, and wherein the power mode changing portion is also configured to change a power mode of the wireless communications device based on the data check signal (see col.11 line 56 through col.12 line 3).

Regarding claim 8, Arrigo et al. disclose the power changing mode portion is configured to change a power mode of the wireless communications device into a transmission sleep mode if the data check signal indicates that there is no data to be transmitted, and wherein the power changing mode portion is configured to change a

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power mode of the wireless communications device into a working mode if the data check signal indicates that there is data to be transmitted (see col.11 line 56 through col.12 line 3).

Regarding claim 9, Arrigo et al. disclose when the wireless communications device is in the transmission sleep mode, only a transmission portion of wireless communications device is in a power down mode (see power source status line, 120, 145, 150b, fig.1a).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 10-18, are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindskog et al. (US Pub. 2002/0132603) in view of Arrigo et al.

Regarding claim 10, Arrigo et al. fail to disclose wherein the wireless communication device is a wireless LAN module.

Lindskog et al. disclose wherein the wireless communication device is a wireless LAN module (see par.004). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Arrigo et al. with the above teaching of Lindskog et al. in order to provide a wireless Ethernet card driving power saving mode for a laptop computer.

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Regarding claims 11 and 15, Lindskog et al. disclose a wireless LAN module, comprising:

checking means for checking a communication sensitivity of at least one communications channel (see par.066);

wherein the switching means is also configured to switch the power mode of the wireless LAN module to a normal mode after a predetermined delay period elapses after the power mode has been set to the power down mode (see par.071, “a timer is started, or restarted” reads on “a predetermined delay period elapses” with broadest reasonable interpretation).

Lindskog et al. fail to disclose switching a power mode of the wireless LAN module to a power down mode if the checking means determines that a communication sensitivity is less than a predefined sensitivity value.

Arrigo et al. disclose switching a power mode of the wireless LAN module to a power down mode if the checking means determines that a communication sensitivity is less than a predefined sensitivity value (see col.11 lines 62-65, “quantitative of activity data corresponds to sensitivity value). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Lindskog et al. with the above teaching of Arrigo et al. in order to provide decision to sleep mode is based on data transmission activity detecting on quantization of data transmission.

Regarding claim 15, Lindskog et al. disclose a wireless LAN module, comprising:
setting up a communication channel of a wireless LAN networks (see par.066);

checking a communication sensitivity of the set channel (see par.071); and

Lindskog et al. fail to disclose switching a power mode of the wireless LAN module to a power down mode if the checking means determines that a communication sensitivity is less than a predefined sensitivity value.

Arrigo et al. disclose switching a power mode of the wireless LAN module to a power down mode if the checking means determines that a communication sensitivity is less than a predefined sensitivity value (see col.11 lines 62-65, "quantitative of activity data corresponds to sensitivity value). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Lindskog et al. with the above teaching of Arrigo et al. in order to provide decision to sleep mode is based on data transmission activity detecting on quantization of data transmission.

Regarding claim 12, the modified Lindskog et al. fail to disclose the predefined sensitivity value is approximately 70 percent. The Examiner takes an Official notice is taken that the concept the predefined sensitivity value is approximately 70 percent is well known in the art. It would have been obvious the predefined sensitivity value is approximately 70 percent of transmission such as statistic data activity.

Regarding claim 13, the modified Lindskog et al. disclose the switching means is configured such that if the checked communication sensitivity is more than the predefined sensitivity value, a power mode of a transmission block of the wireless LAN module is set to a power down mode if no data needs to be transmitted by the wireless LAN module (see Arrigo et al., col.11 line 64 through col.12 line 3).

Regarding claims 16 and 18, the modified Lindskog et al. disclose changing a power mode of the wireless LAN module back to a working mode after a predetermined delay period expires after the wireless LAN module is set to the sleep mode (see Arrigo et al., col.12 lines 1-3).

Regarding dependent claim 14 and 17, the modified Lindskog et al. disclose the power mode changing portion is configured to change a power mode of the wireless communications device into a working mode if the sensitivity signal indicates that the communications sensitivity is greater than a predefined reference value, and wherein the power mode changing portion is configured to change a power mode of the wireless communications device into a sleep mode if the sensitivity signal indicates that the communications sensitivity is less than a predefined sensitivity value (see Arrigo, col.11 line 56 through col.12 line 3, "algorithm" corresponds to "greater than" and "less than" and "quantitative" corresponds to "sensitivity value").

Allowable Subject Matter

5. Claims 19-20 are allowed.
6. Claims 3 and 6, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

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Regarding dependent claim 3, the prior arts fail to teach "the predefined sensitivity value can be changed by a user", as cited in the claim.

Regarding dependent claim 6, the prior arts fail to teach "the length of the predetermined time period varies based on the value of the predefined sensitivity value", as cited in the claim.

Regarding dependent claim 19, the prior arts fail to teach "changing a power mode of the wireless LAN module to a power down mode if the result of the checking step indicates that the channel was not properly set up", as cited in the claim.

Conclusion


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu Nguyen whose telephone number is 571-272-7883. The examiner can normally be reached on Monday through Friday from 6:30AM-2:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TN

February 16, 2006


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